

GLAST ACD Trade Decision Comment

Michael Amato 3/03

Subject : Why we are not going with a design that allows a good shield between FREE boards on the electronic chassis

Background: When Bob Really was doing the electronic Chassis design we had communicated the possible need for a shield between FREE boards to protect us in the event of noise between boards. With the events that took Bob off of the job and the intermittent way Bryan eventually received responsibility for the design (we thought many times Bob was coming back), and given other higher priority items in that area, the need slipped through the cracks until a few weeks ago. In the fab readiness review for the Engineering model of the electronic chassis the issue was brought up. There is the possibility of putting an insulated, thin flexible shield into the current design by just adding breaks in the standoffs. A flexible shield was understood to be sufficient in the past by the mechanical side. However it turns out the flexible shield could touch parts on the boards and even though they are insulated too this was deemed to be too risky. The spacing between boards is too tight for a straight plane semi rigid shield design. By the way the spacing is close so Kevin will be looking at the board analysis more closely and we will look at some last minute parts shuffling to move the parts that are closest to each other around, increasing minimum gaps. Dave S believes the risks for noise are low. We need to get the eng model for the chassis out to fab because a whole slew of other items await first testing on that model also. So we will take a small risk and the engineering model design will not have the shield, but we won't have to delay it to redesign it. If tests of the eng model result in a noise issue we can not improve another way (i.e small shields on the board itself) we will have to modify the design to accommodate a shield.